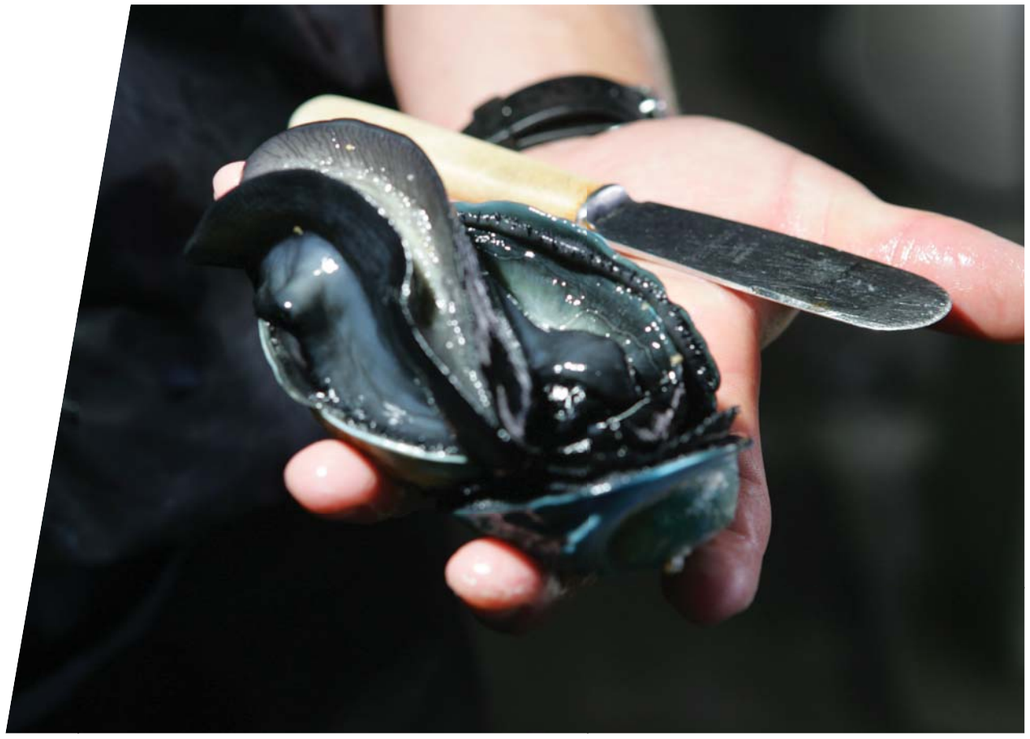
AQUACULTURE IN NEW ZEALAND

PRICEWATERHOUSECOOPERS

INVESTMENT NEW ZEALAND
A DIVISION OF NEW ZEALAND TRADE AND ENTERPRISE

New Zealand is one of the world's finest locations for aquaculture. The New Zealand government, through Investment New Zealand, is committed to helping investors discover the opportunities that New Zealand offers aquaculturists and assisting inward investment to this growing sector.



The inside of a paua shell

INTRODUCTION

New Zealand has thousands of kilometres of pristine, unpolluted coastline situated in the vast South Pacific Ocean. Its isolated position, far removed from intensive human activity, and many sheltered harbours and bays, make New Zealand the perfect location for growing a diverse array of shellfish, finfish, seaweed and other aquatic and marine organisms.

New Zealand's aquaculture sector has advanced at a rapid rate since the late 1980s, having grown at an average annual rate of 11.7% by volume over the 20 years to 2005, yet it remains in the early stages of its development. The industry is based on natural competitive advantages, supported by in-depth knowledge, excellent research capability and a spirit of innovation.

Global demand for aquaculture products is rapidly rising. With wild fisheries production static due to declining stocks, there is a continuing shift toward sustainable fisheries practices including aquaculture.

The aquaculture industry is of increasing social and economic importance in New Zealand. New Zealand has developed a structured system of aquaculture legislation to manage the competing demands for coastal marine space and to evaluate the impact of aquaculture on the values placed on the land and coast.

There are many successful ventures in the New Zealand aquaculture industry. A critical success factor is New Zealand's pathogen-free environment. The global market demands safe, healthy seafood. New Zealand delivers this in abundance.

New Zealand is a reputable producer of high-quality, safe food and beverage products.

New Zealand also has a capable and diverse aquaculture research community, actively involved in driving the sector through commercial ventures and development partnerships. These organisations welcome opportunities to work with new investors. Industry-led new species' development is assisting the sector to move towards new, high-value species and value-added products that promise to be the future of aquaculture in New Zealand.

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Photo courtesy of The Cawthron Institute

Paua spat

Why New Zealand?

New Zealand's isolated location in the vast South Pacific Ocean makes it one of the world's finest environments for marine farming. The coastline is cleansed by strong, cold, nutrient-rich southern ocean currents, creating ideal growing conditions for a variety of shellfish, finfish, seaweed and other marine species.

New Zealand is far removed from intensive human activity of the kind responsible for polluting the waters of many of the world's biggest aquaculture-producing nations. The absence of inorganic toxins and the pathogen-free aquatic environment mean that New Zealand is one of the few countries in the world where shellfish do not require depuration prior to processing. Pacific Oysters from New Zealand are certified by the Japanese Ministry of Health and Welfare for sale in their raw form.

The New Zealand government enacts legislation designed to prevent harmful activities (aquaculture or otherwise) degrading the marine environment. The industry maintains robust water-testing procedures. As a consequence, marine farmers are able to meet the growing global demand for safe, healthy seafood produced through sustainable aquaculture activities with a high level of environmental performance.

Many of the production techniques developed in New Zealand are world-leading and demonstrate a spirit of innovation that has helped to shape the industry. There is an active aquaculture research and development community in New Zealand that is able to reduce investment risk substantially.

Established industry associations by species and region highlight the degree of co-operation in the industry. Formal skills-based training programmes demonstrate the commitment from the industry to ensure the long-term success of the sector by providing the means to produce a highly skilled pool of workers.

New Zealand is a country that has developed a strong aquaculture industry based on the quality of its environment and the innovation and perseverance of its investors.

The Industry

Aquaculture in New Zealand has traditionally been dominated by the Greenshell™ mussel[1] industry with a smaller-scale industry around Pacific Oysters. The Greenshell™ mussel continues to lead the way in terms of volume and export earnings, but the high-value King Salmon is now having a significant impact on the sector.

The total value of aquaculture production in New Zealand was approximately NZ$289 million for the 2004 year[2]. One third of output was consumed domestically; the remainder was exported.

The aquaculture industry in New Zealand is forecasting a continuation of recent rapid growth. The New Zealand Aquaculture Council 2005 annual report forecasts total aquaculture sales of NZ$1,330 million by 2024; of this total NZ$1,038 million is assumed to represent export sales. This represents a cumulative average growth rate of over 8% per annum.

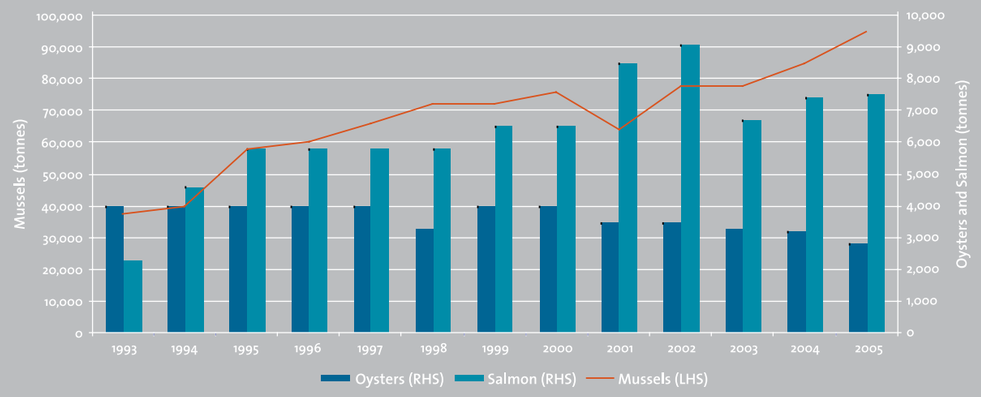
The graphs on the following page show the strong production and export earnings growth in the Greenshell™ mussel and King Salmon industries. The reduction in export earnings observed in 2003 and 2004 is due to a high New Zealand dollar and a decrease in the international commodity price for mussels and salmon. In general, New Zealand aquaculturists are looking to position themselves at the high-value end of their respective markets, thereby avoiding commodity price fluctuations. The reduction in King Salmon volumes from 2001-02 levels is due to a strategic repositioning of one of New Zealand's larger King Salmon farmers.

Packaging shellfish

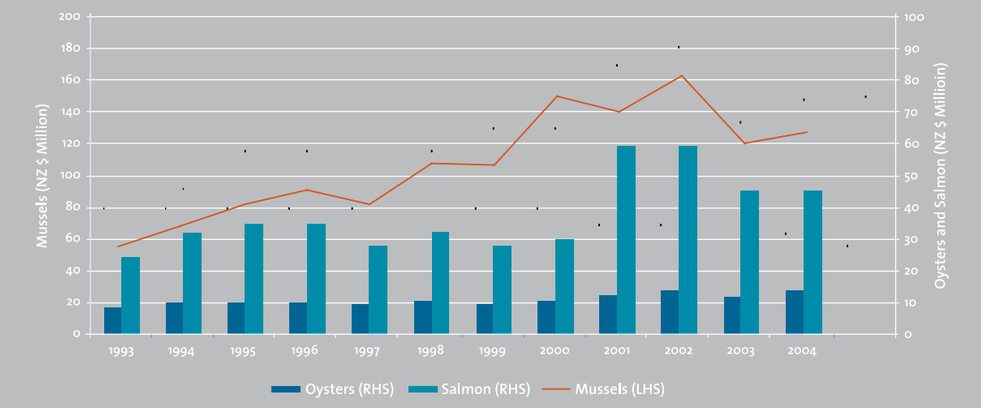
[1] *The Greenshell™ mussel is a native variety of green mussel found only in New Zealand and is prized for its texture, versatility and delicate flavour.*

[2] *Figures obtained from the New Zealand Marine Farming Association.*

Estimated New Zealand Mussel, Oyster and Salmon Aquaculture Production [3]

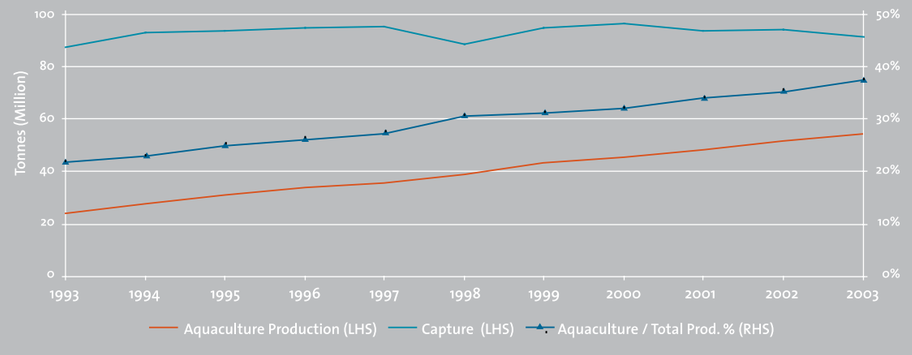


Estimated Export Earnings from New Zealand Aquaculture Products [3]



Global growth in seafood production has averaged 2.7% per annum since 1993. With static or declining wild fisheries production, it is aquaculture that has driven this growth.

Global Aquaculture vs. Capture Production [4]



[3] *Statistics from New Zealand Marine Farming Association*
[4] *Statistics from United Nations Food and Agriculture Organisation*

The Industry (cont.)

New Zealand's proportion of global aquaculture production has remained broadly static over the past ten years at between 0.15% and 0.25%, despite world aquaculture increasing significantly due to large volumes of low-value products from nations such as China and Chile. Although New Zealand's share of world aquaculture is small, it is representative of a greater focus on high-value products earning greater returns per hectare of marine farm.

The following table presents the number of individual farms by major species in New Zealand as at 2004[5], along with industry estimates of total sales (domestic and export) for the same period[6].

SPECIES	NUMBER OF FARMS	TOTAL HECTARES OF MARINE SPACE	TOTAL ESTIMATED SALES NZ$MILLION
Greenshell™ mussels	645	4,747	181
Pacific Oysters	230	750	26
King Salmon	23	60	81

New Zealand has established significant export markets for its aquaculture products in Japan, the United States, the European Union and Australia. The tables below show the top five export destinations for New Zealand-produced King Salmon, Pacific Oysters and Greenshell™ mussels for 2005.

EXPORT DESTINATION/ SPECIES	EXPORT VOLUME ('000 TONNES)	EXPORT VALUE (NZ$000 FOB)
Greenshell™ mussels		
United States	13,263	59,327
Spain	3,208	15,964
Australia	2,892	15,320
South Korea	2,823	14,142
United Kingdom	1,436	6,885
King Salmon		
Japan	2,000	15,047
Australia	593	6,186
United States	435	3,195
Taiwan	74	495
Vietnam	53	410
Pacific Oysters		
Australia	982	7,101
Japan	398	3,288
United States	243	1,695
French Polynesia	216	1,299
New Caledonia	109	687

[5] *Figures from the New Zealand Aquaculture Council.*
[6] *Figures from the New Zealand Marine Farming Association.*

Photo courtesy of The Cawthron Institute

Oyster farm

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Aquaculture Species and Technology

One way to consider the sphere of opportunities in aquaculture in New Zealand is to examine the marine farming technologies employed and the species that can be produced using these techniques. The left-hand side of the following figure describes the range of techniques employed, the middle of the diagram indicates the location (either saltwater or freshwater) and the right-hand side features the species that can be farmed using these methods in particular locations.

New Zealand's aquaculture industry is predominantly involved in long-line farming for Greenshell™ mussels, intertidal farming for Pacific Oysters and cage farming for King Salmon. The technology tree approach is an ideal way to consider the impacts that a particular method of aquaculture will have for a given array of species.

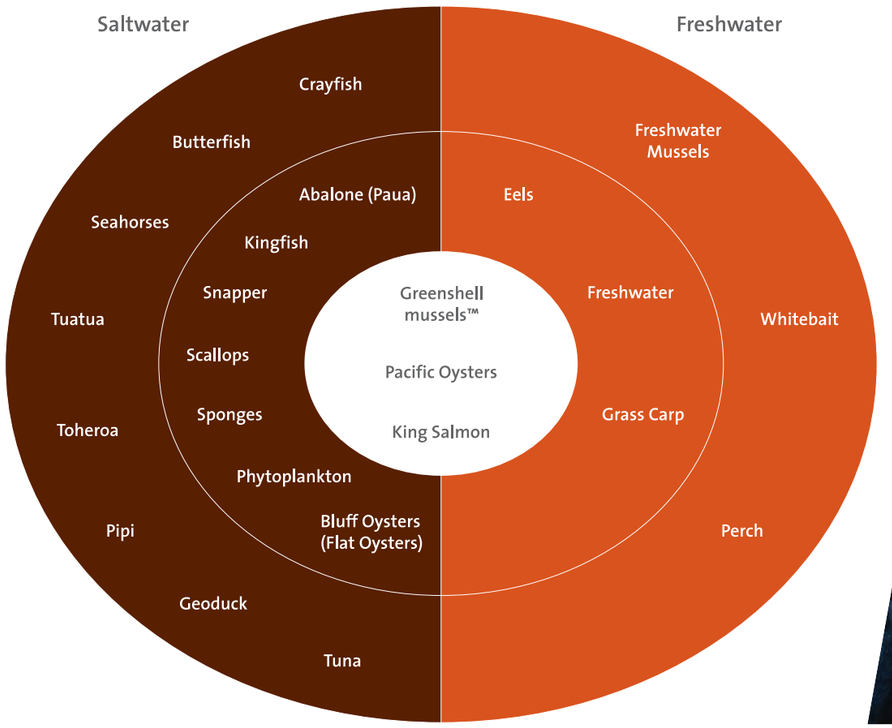
The technology approach gives an effects-based decision-making process (rather than a species-based approach), which fits well with New Zealand's aquaculture legislation.

Mussel farm

Aquaculture Species and Technology (cont.)

The following diagram represents the current array of opportunities for the farming of species that exists within the New Zealand aquaculture sector. The inner core of the diagram represents species with well established technology and successful ventures involved in producing that species. The inner circle represents species that are the focus of significant research and some limited commercial ventures. The outer circle represents species that have yet to be explored in New Zealand to any great extent but which may present opportunities in the future.

There is a significant research community in New Zealand that is investing considerable resources into new species' development. Kingfish and Sea Sponges are two species that have been the focus of recent efforts.



Aquaculture Locations

The location of aquaculture in New Zealand is dictated by the availability of sheltered regions with good tidal flows and the appropriate seawater temperature range for the given species. The map below indicates the areas in New Zealand where aquaculture activities are most prominent[7].

Seawater temperature determines the appropriate species to farm and farm locations. New Zealand has three broad seawater temperature zones, a warm zone north of a horizontal line through Hamilton, a temperate zone from south of Hamilton through to just south of Wellington and a cool zone south of Wellington.

[7] *This map is reproduced courtesy of the New Zealand Marine Farming Association*

Aquaculture legislation is designed to foster the long-term development of the industry by protecting the environmental advantages that New Zealand has over its competitors.

New Zealand Greenshell™ mussels

Industry Structure and Support

There is a high degree of co-operation and collaboration through various industry bodies and associations. The principal, overarching organisation for aquaculture is the New Zealand Aquaculture Council Inc ("NZAqC"), which is made up of representatives from the three major species groups plus representation from abalone ("paua") producers. Non-voting observer status is granted to other organisations that have an interest in aquaculture, at either a national or a local level. The NZAqC represents on an "as-needed" basis the collective interests of the New Zealand aquaculture sector.

Owing to the rapid growth of the New Zealand aquaculture industry over the past decade, there is an ever-increasing need for skilled people at all levels of the industry. The Seafood Industry Training Organisation ("SITO") was established to address this demand. SITO works closely with the industry to develop qualifications and training standards, an example being the National Certificate in Aquaculture, which directly benefits the industry by standardising operational practices and benefits individuals by providing formal recognition of their skills and experience.

The industry and government are committed to providing funding and the structure to develop a pool of trained aquaculture workers.

Aquaculture Legislation

New Zealand has developed a structured system of aquaculture legislation to manage the competing demands for coastal space required for aquaculture and to evaluate the impact of aquaculture on the varied values placed on the land.

The challenges of managing aquaculture development are not unique to New Zealand. Aquaculture legislation is designed to foster the long-term development of the industry by protecting the environmental advantages that New Zealand has over its competitors.

Aquaculture legislation in New Zealand underwent a series of major reviews in the late 1990s and in 2000, culminating in the 2004 aquaculture law reforms. New Zealand's regional councils now take the lead role in terms of coastal management and granting consents for new marine farms.

New marine farms are to be located in special coastal areas known as Aquaculture Management Areas ("AMAs"). AMAs are designed to be a coastal management tool to assist in considering the cumulative environmental, commercial and social impacts of aquaculture. AMAs are to be specified in a particular regional or unitary council's regional coastal plan.

The aquaculture law reform aims to:

"... enable the sustainable growth of aquaculture and ensure the cumulative environmental effects are properly managed while not undermining the fisheries regime or Treaty of Waitangi[8] settlements"[9].

The Maori people of New Zealand, represented by individual tribes ("iwi"), play an important role in the history and future of the fisheries industry in New Zealand. Related to the Crown's Treaty of Waitangi obligations, iwi are entitled to 20% of marine farm space consented since 1992 and 20% of all future consented marine farm space. The allocation of marine farming space to iwi presents opportunities for investors to partner with iwi in developing their entitlements.

[8] *Treaty of Waitangi settlements are Crown apologies, commercial redresses and/or cultural redresses relating to historical breaches of New Zealand's founding document signed in 1840 by the indigenous people of New Zealand and the British Crown.*

[9] *Text from the Aquaculture Reform Bill 2004, explanatory note.*

Aquaculture Legislation (cont.)

This table details the potential allocation of newly consented marine farm space under the three methods of applying for an AMA.

AMA METHOD	IWI ALLOCATION IMPLICATIONS
Council-initiated plan change	20% of space allocated to iwi An additional 20% may be allocated to iwi to assist in satisfying the Crown's obligations regarding existing aquaculture space if required Up to 40% in total may be allocated to iwi
Invited private plan change	20% of space allocated to iwi
Normal private plan change	20% of space allocated to iwi An additional 20% may be allocated to iwi to assist in satisfying the Crown's obligations regarding existing aquaculture space Up to 40% in total may be allocated to iwi

Photo courtesy of The Cawthron Institute

Baby Paua

AQUACULTURE SUCCESS IN NEW ZEALAND

There is no better evidence of the quality of New Zealand as an aquaculture location than that found in the companies and individuals at the forefront of this innovative industry. The four companies profiled in this document are representative of the breadth of opportunities in the industry and provide an indication of the unique factors that have contributed to their organisations' successes on the domestic and global stages.

New Zealand King Salmon

The New Zealand King Salmon Company Limited ("NZKS") is a vertically integrated salmon farming, processing and marketing organisation. King Salmon at NZKS are produced with an intensive family broodstock programme using land-based, freshwater hatchery technology with subsequent rearing in sea cages.

Salmon are raised from eggs in hatcheries and are transferred to outside raceways when they are fry. After a period of eight to 13 months (from eggs), salmon smolt are transferred to sea cages where they are reared on a controlled food source to a market size of 3.5-4.0 kilograms. The entire lifecycle is between 19 and 31 months, designed to fit year-round market and end-product requirements. NZKS produces more than 5,000 tonnes of King Salmon annually, generating revenue of NZ$64 million of which NZ$31 million is from salmon product exports to Japan, Australia, the US, Pacific Islands and other Asian nations.

In marketing its 159 individual products, NZKS actively promotes the natural processes by which its salmon are grown and the quality of the environment in which they are cultivated. The temperature and purity of the water are vital to the quality of the end product. The salmon produced by NZKS do not require antibiotics, vaccines or chemical treatments and are not subjected to any form of growth hormone or bovine or genetically modified product. All of these factors feature prominently in the marketing of NZKS products.

"Faced with higher costs in a very competitive market, the quality and purity of New Zealand's marine environment is critical to producing the superior products that are the foundation of our domestic and export value-added business focus."

– Paul Steere, Chief Executive, New Zealand King Salmon

NZKS seeks to add value to its products by promoting demonstrated quality standards, providing a consistent year-round supply, actively promoting the uniqueness of the products and the environment in which they are cultivated and demonstrating the complete traceability of its products.

NZKS has managed to internalise almost all of the processes involved in getting its products to market. In doing so, it has utilised New Zealand's natural competitive advantages, in terms of its pathogen-free environment and ideal growing conditions, to create a brand with a story that appeals to a broad range of domestic and foreign consumers.

Salmon swimming upstream

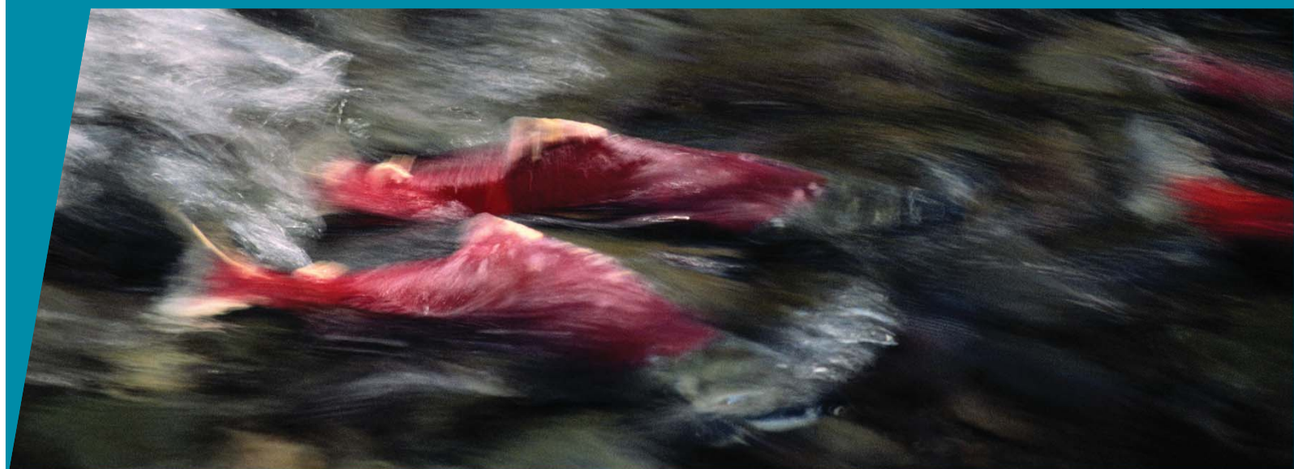


Photo courtesy of The Cawthron Institute

Pacific Oysters

Clevedon Coast Oysters

Clevedon Coast Oysters™ ("CCO") is a premium brand of Pacific Oysters produced in the Hauraki Gulf, east of Auckland. CCO oysters are produced using a combination of intertidal spat catching, intertidal on-growing on racks and long-line culture. CCO produces approximately 400,000 dozen oysters each year. From the time of spat placement, Pacific Oysters in New Zealand take between 12 and 18 months to reach harvest size.

CCO oysters are sold domestically and are also exported under the JEMCO™ brand and the CCO brand. JEMCO™ is a successful joint venture between four pacific oyster growers and a marketing company, formed to co-ordinate efforts by New Zealand oyster producers to develop long-term international markets. The marketing efforts of JEMCO™ are largely credited with accessing the lucrative Japanese market for raw oysters – New Zealand-produced oysters are accredited by the Japanese Ministry of Health and Welfare for raw consumption in Japan.

"A consistently high quality product is vital to the success of our business. The abundance of natural spat fall and our pathogen-free marine environment are key to producing such high quality oysters."

- Callum McCallum, Managing Director, Clevedon Coast Oysters

JEMCO™'s success lies in the comprehensive microbiological and biotoxin monitoring programmes adopted by the farmers. Their phytoplankton monitoring process and additional quality control measures are world leading.

New Zealand's high-quality water provides CCO with a significant competitive advantage in producing premium-grade Pacific Oysters. New Zealand's waters are highly productive due to high algae populations and the presence of natural spat fall. This offers CCO a cost and quality advantage over many international competitors who rely on hatchery technology to provide spat.

New Zealand's water is considered very safe for growing oysters, with a complete absence of inorganic toxins and pathogens and rigorous monitoring programmes to detect the presence of any organic pathogens. New Zealand oysters are not required to undergo depuration or post-harvest disinfection processes.

CCO's success in export markets is built on the back of its brand, which leverages off its high-quality growing conditions and production processes. CCO became the first oyster production company in the world to achieve organic certification in 2005.

New Zealand Greenshell™ mussel

Sealord

Sealord Limited ("Sealord") is a global seafood venture with its New Zealand headquarters in Nelson. Approximately NZ$40 million of the Sealord Groups NZ$600 million annual turnover is attributable to Greenshell™ mussel farming and processing activities. Sealord processes 20,000 tonnes of Greenshell™ mussels annually, making it the largest processor in New Zealand.

In terms of accessing international markets, Sealord has been able to utilise its established distribution network for capture fisheries to market its aquaculture products. This not only eases the transition into foreign markets but permits the exercise of a degree of volume-driven supplier power when negotiating with distributors and customers. Sealord has invested heavily in market infrastructure, including a recent new investment targeted at servicing the rapidly developing markets in Eastern Europe.

"New Zealand Greenshell™ mussels are uniquely attractive, great tasting, and safe eating mussels from pristine waters. Positively boutique in a mass of one million tonnes of blue and black mussels."

– Jon Safey, Marketing Manager, Sealord Group

Sealord believes that the New Zealand Greenshell™ mussel industry leads the world in terms of on-farm productivity. The continuous rope growth technology and strength of the species mean that there is very little wastage in harvesting (i.e. product ending up on the sea floor). The industry's robust water quality programmes, particularly the phytoplankton testing processes, are further significant competitive advantages.

Sealord actively engages with New Zealand's aquaculture research and development community. It has particularly benefited from its research partners as they have demonstrated a willingness to put their research on the line in a commercial sense.

Sealord markets an organic Greenshell™ mussel, having achieved the standards and codes of practice stipulated by BioGro New Zealand. Sealord sees demand for seafood products sourced from sustainable fisheries continuing to increase, providing further opportunities for the aquaculture sector. This trend is demonstrated in the decision by US retailer, Wal-Mart, to source its seafood products from sustainable fisheries resources exclusively.

Sea-Right Investments

Sea-Right Investments Limited ("Sea-Right") is a small, highly innovative company that produces and markets a variety of aquaculture-related products. Its principal product is Eyris Blue Pearls™. These pearls are cultivated inside paua (abalone) and represent a world first for farmed production on a commercial scale. Paua pearls are prized for their beauty and vast array of colours.

The paua (*Haliotis Iris*), a species of abalone unique to New Zealand, is carefully gathered by free diving and transported to ocean-based farms. The locations selected for the ocean-based farms offer optimal conditions for blue pearl culture sheltered harbours with pristine waters that are rich in nutrients with easy access to seaweed. The abalone feed on a gourmet diet of different seaweeds consuming up to 50% of their own body weight per week.

The method for cultivating a blue pearl involves inserting a specially designed plastic seed between the flesh and shell of the paua in a process termed nucleation. After a minimum period of 18 months but up to three years the harvest takes place. Approximately 20% of the pearls are of marketable quality and only 2% produce what is termed a gem quality pearl with a perfect skin, mirror finish and flawless colour.

Blue pearl sales have increased significantly over the past few years, with interest from around the world. In 2006, Eyris Blue Pearl™ collections are being launched in Italy and in the US at the JCK Las Vegas Jewellery Fair. Much of the branding platform for this gem is focused on the uniqueness of New Zealand and its natural advantages – the pristine waters and intense colours that are reflected in the blue pearls.

The integrity of the blue pearls is critical to the success of the gem. Sea-Right can offer a complete guarantee of authenticity as the pearls are tracked throughout the culturing and grading process. Each pearl is sold with a guarantee, giving consumers assurance that the pearls are of natural colour and lustre and that they are cultured in harmony with nature. The Sea-Right team has strived for many years to develop and optimise culturing methodologies.

The products produced by Sea-Right are quality examples of the high-value species and products that can be produced in New Zealand. Innovation and the use of good science in production processes, combined with a marketing angle that utilises New Zealand's competitive advantages in aquaculture production, have been critical to Sea-Rights success.

"Sea-Right Investments Ltd is in the business of enhanced aquaculture. We believe Security of Harvest Ensures Replenishment and to back this up we are actively involved with large scale abalone reseeding and kelp research. Isolation, once seen as a barrier to overseas markets, is now a competitive advantage. The beauty and rarity of Blue Pearls and the health and taste of Kelp Pepper reflect New Zealand's image as a far away paradise."

– Roger Beattie, Managing Director,
Sea-Right Investments Ltd

The Eyris Blue Pearl™

New Zealand Greenshell™ mussels

RESEARCH CAPABILITY

New Zealand has a highly capable and diverse aquaculture research community that is actively involved in driving the sector through commercial ventures and development partnerships. The depth of New Zealand's research capability is best highlighted by examining the activities of the country's leading aquaculture research and development institutes.

The National Institute of Water and Atmospheric Research Limited (NIWA) has the largest team of coastal marine scientists in New Zealand. NIWA Science provides the underlying research capability, through its National Centre for Fisheries and Aquaculture, to assist clients with the technical aspects of aquaculture in New Zealand and to promote sustainable resource management.

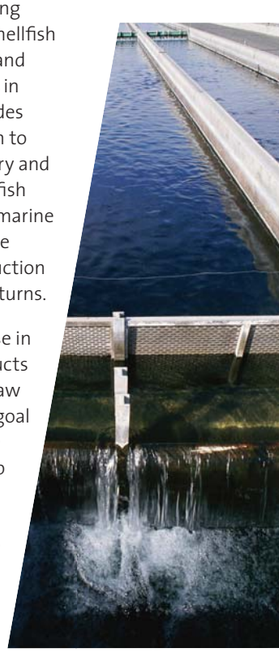
NIWA Natural Solutions is the commercialisation vehicle of NIWA. Its principal role is to transform the knowledge base and intellectual property generated by NIWA Science into product-based commercial opportunities. This is achieved by undertaking commercial feasibility studies, identifying market opportunities and partnering or facilitating commercial development activities.

A trusted technology partner is a critical success factor to aquaculture in New Zealand due to the unique species and marine environment in this country. NIWA's depth of experience in aquaculture has evolved with the development of the industry. It is ideally placed to serve most of the aquaculture industry's technical needs. NIWA offers a world-class team of research scientists and facilities that is able to reduce the risk of an investment in aquaculture in New Zealand.

The Cawthron Institute provides world-leading research expertise in the fields of selective shellfish breeding, cryopreservation, shellfish health and broodstock conditioning. Cawthron engages in commercial-scale spat production and provides assistance to industry participants in relation to hatchery technology and engineering, nursery and marine farm technology. The aim of its shellfish selective breeding programme is to provide marine farmers with the same benefits that selective breeding brings to agriculturists lower production costs, higher yields and improved product returns.

Crop and Food Research has specific expertise in processing and packaging aquaculture products and in identifying the unique properties of raw materials from the marine environment. Its goal in this area is to maximise returns from New Zealand's sustainable fisheries resource. Crop and Food's blue skies research programmes and specific partnerships with industry represent an important contribution to New Zealand's aquaculture knowledge base.

Crop and Food Research has specific expertise in processing and packaging aquaculture products and in identifying the unique properties of raw materials from the marine environment. Its goal in this area is to maximise returns from New Zealand's sustainable fisheries resource.



EMERGING OPPORTUNITIES

Opportunities are abundant in the New Zealand aquaculture industry. One such opportunity relates to potential development partnerships with iwi. The aquaculture law reforms require that iwi are entitled to allocations of space within new AMAs.

Regional councils are required to provide for 20% of the space of marine farms established between 1992 and 2004 in any new AMAs created since 1 January 2004. Councils are also required to provide to iwi 20% of any new AMAs created since 1 January 2004.

The provision of marine farming space to iwi will open investment avenues for both iwi and other investors. It is likely that iwi developers will seek partnerships for the development of marine farm space and the working capital required to operate these ventures.

SPECIES	REVENUE PER ANNUM PER HECTARE
Greenshell™ mussels	NZ$38,000
Pacific Oysters	NZ$35,000
King Salmon	NZ$1,350,000

[10]

An example of NIWA's commitment to developing new aquaculture species is the Kingfish hatchery located at the Bream Bay aquaculture research facility. Through continual improvements in husbandry and research into nutrition and reproductive biology, NIWA scientists have been able to produce large numbers of high-quality juvenile Kingfish.

The farming of Kingfish is viewed as a promising opportunity as:

- the wild catch of the species is seasonal and unpredictable;
- the species is relatively fast growing, reaching marketable size in 12-15 months;
- it has a flesh quality that lends itself to a variety of product types; and
- the value of the fish on the international market is broadly similar to that of King Salmon.

Kingfish is the first of a range of high-value species that NIWA intends to introduce to the New Zealand aquaculture industry. In addition, NIWA is working with industry partners on developing new seaweed species for aquaculture. NIWA is also involved with other research entities and industry partners on developing farming methods for a sea sponge, Mycale, which has pharmacological components.

In its research activities NIWA seeks to establish sustainable aquaculture systems. Investors in the New Zealand aquaculture industry are well placed to leverage off this to gain a competitive advantage from the superior environmental performance of its production techniques.

From this brief description of some of NIWA's extensive aquaculture research activities, it is clear that its vision of the future of aquaculture in New Zealand involves extensive investment in high-value products. Examples include finfish such as Kingfish, sponges with pharmacological properties, food ingredients with bioactive properties and adding value to existing aquaculture species.

As a demonstration of how high-value products may provide significant avenues for growth in the aquaculture industry, the table presents industry estimates of revenue per annum per hectare by major developed species:

New Zealand is well served for aquaculture research and development expertise. Along with NIWA, at least two other research institutes and several universities are able to provide specific aquaculture-related services.

Fish feed technology is not well advanced in New Zealand. There are no specialised extruded feed mills operating at present. This aspect of the aquaculture industry has the potential to drive the finfish farming industry in the same way that NIWA intends to propel the industry forward with its marine hatchery initiatives.

At present the high-quality fish food required for the finfish farming industry is imported from Australia, Chile or Canada. The lack of milling technology and expertise associated with the extruded fish food industry presents significant investment opportunities.

Partnerships with existing New Zealand aquaculture industry participants offer a further means of entry to the sector. As New Zealand marine farmers seek to move further away from commodity-based markets to value-added products, opportunities emerge for food processors and marketers to engage with farmers to produce even higher-value products.

[10] *Figures sourced from the New Zealand Aquaculture Council and the New Zealand Marine Farming Association.*

CONTACT US

As a government agency, Investment New Zealand (a division of New Zealand Trade and Enterprise) helps to promote and facilitate foreign direct investment into New Zealand. We actively assist international investors to:

- establish green field operations in New Zealand;
- relocate their businesses to New Zealand; and
- invest in and work with New Zealand companies in global ventures.

Our team of 50 professionals, based onshore and around the world, promotes New Zealand business opportunities in global markets. We have considerable expertise and offshore networks. Together, these generate valuable market intelligence and research assistance that can greatly reduce costs and set-up time for the investor. We work to make your start-up in New Zealand fast and efficient.

Investment New Zealand also provides a single point of government contact for foreign investors. Experienced investment managers connect you seamlessly with a network of local economic development agencies. These local agencies offer another level of assistance and contact with reputable private sector advisers. Any information provided by you in relation to business proposals and plans for investment in New Zealand will be treated in strictest confidence.

For further assistance please contact our Food and Beverage team on:

PHONE: +64 9 915 9205 or +64 9 366 4768

EMAIL: FB@investmentnz.govt.nz

WEBSITE: www.investmentnz.govt.nz

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